NAVSHIPREPFAC YOKOSUKA
LOCAL STANDARD ITEM

FY-00

ITEM NO: 099-63YO
DATE: 01 JUL 1998
CATEGORY: II

1. SCOPE:

1.1 Title: Lubricating Oils and Hydraulic Fluids; analyze

2. REFERENCES:

a. S9086-H7-STM-010/CH-262, Lubricating Oils, Greases, Specialty Lubricants, and Lubrication Systems

b. S9086-S4-STM-010/CH-556, Hydraulic Equipment Power Transmission and Control

c. S9086-HB-STM-010/CH-233, Diesel Engines

3. REQUIREMENTS:

3.1 Accomplish tests of each sample in accordance with the specified test methods of Table One or Table 2.

3.1.1 Test selections shall be based on the sample type and service.

3.2 Determine whether water present in each sample is fresh or salt water.

3.2.1 Measure and record salinity content in parts per million (ppm).

3.3 Accomplish a spectrographic analysis of each sample, recording and reporting the concentration of the following elements in ppm with the indicated degree of accuracy:

IRON	COPPER	TIN	MAGNESIUM	LEAD
ALUMINUM	SILVER	CHROMIUM	NICKEL	SILICON

3.3.1 The sensitivity and reliability of the equipment used for the test shall be that the standard deviation obtained in the analysis for each specified element shall not exceed the appropriate value in the following table:

ELEMENT CONCENTRATION IN STANDARD REFERENCE SPECIMEN (RANGE IN PPM)	STANDARD DEVIATION (MAXIMUM IN PPM)
3-9	1.5
10-19	2
20-49	3
50-99	5
100-199	8
200-500	15

3.4 Accomplish specific gravity test for each MIL-H-19457 sample and determine hydrocarbon oil content.

3.5 Accomplish specific gravity and ignition test for each MIL-H-22072 sample and determine high temperature stability after 168 hours at 158, plus or minus two degrees Fahrenheit.

3.6 Submit four legible copies of a report listing completed test results of 3.1 through 3.5 for each sample to NAVSHIPREPFAC.

3.6.1 Reports shall be submitted within 48 hours after the qualified chemical laboratory receives each sample.

3.6.2 Reports shall include recommendations for continued use, disposal, or resampling of each tested oil or fluid sample.

3.7 Use Table 262-4-1 of 2.a and Table 556-8-1 of 2.b for guidance for test accept and reject criteria for each in-service sample.

3.7.1 Use Table 233-8-2 of 2.c for test accept and reject criteria for 9000 Series lube oil.

3.8 Use the applicable Military Specification for accept and reject criteria of each sample from new fluids and oils.

4. NOTES:

4.1 Ship's Force will identify (MIL-SPEC) specification for each sample from in-service sources.

TABLE ONE
SHIPBOARD LUBRICATING OILS

ASTM TEST METHOD	MIL-L-15019 MS-6135	MIL-H-17672 MS-2075-TH MS-2110-TH MS-2135-TH	MIL-L-17331 MS-2190-TEP	MIL-L-2015	MIL-L-9000 9250	MIL-H-19457	MIL-L-23669	W-L-825
FLASH POINT DEG C (DEG F) D-92						X		
PERCENT WATER D-95	X	X	X			X		X
VISCOSITY CS @37.8 DEG. C 100 DEG.F D-445					X		X	
ACID NO. D-974	X	X	X			X	X	X
PRECIPI-TATION NUMBER D-91		X	X	X				
ASH D-482	X							
PERCENT OF FUEL OIL DILUTION					X			

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TOTAL BASE NO.D-664 (TEST KIT)					X			

X -- IDENTIFIES EACH TEST REQUIRED FOR EACH FLUID TYPE

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TABLE 2
HYDRAULIC FLUIDS

ASTM TEST METHOD	MIL-F-17111	MIL-H-19457	MIL-L-17672	MIL-L-17331 MS-2190-TEP	MIL-H-22072
FLASH POINT DEG C (DEG F) D-92	X	X			X
PERCENT WATER D-95		X			X
VISCOSITY CS @49 DEG. C 104 DEG.F ASTM D-445	X		X	X	
PERCENT WATER D-1744	X		X	X	
NEUTRALIZATION NO. MAX. ASTM D-974	X		X	X	
SOLID PARTICLES Mg/100 mL MAX 0.2 ARP 785	X	X	X	X	X

X -- IDENTIFIES EACH TEST REQUIRED FOR EACH FLUID TYPE

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